

ABSTRACT

**OPTICAL APPARATUS WITH FARADAY  
ROTATOR, STATIC GAIN FLATTENING  
FILTER AND VARIABLE OPTICAL ATTENUATOR**

5           An optical apparatus for transmitting an optical signal includes a  
static filter, a Faraday rotator and a reflector. The Faraday rotator makes a  
first change in polarization of an optical signal in a first direction, and a  
second change in polarization of the optical signal received from the  
reflector in a second direction. This produces a polarization of the optical  
10       signal that is substantially orthogonal to an initial polarization state of the  
optical signal.